



Flower Creek Information
Planned Removal for FY-08

Basic Problem/Approach: Three Creeks within the Libby (Flower, Granite, and Callahan Creeks) project area have been identified as having highly contaminated LA source materials incorporated into rip-rap used to stabilize the Creek banks. This is a result of bank stabilization work done by Lincoln County and the Army Corp of Engineers work after flooding during the winter of 1995/96. Unfortunately, one of the sources of rip-rap material was a quarry associated with the former vermiculite mine that contained materials up to 90% LA. The Creeks are used quite heavily by children during warm weather months. Exposure sampling indicates that typical child's play can result in exposures up to 3.8 f/cc to LA.

Of the three creeks, Flower Creek is both the most heavily used, and the most heavily contaminated. Specifically, the LA bearing materials have been found in all six sections of the Creek repaired by the ACoE. Because the material is entrained throughout the rip-rap and into the underlying bank, the planned removal action is to excavate the areas in question and then restore them. Preliminary estimates are that the cleanup of Flower Creek will involve roughly 10,000 cubic yards of material, and that costs will be in the \$1.2M - \$1.5M range.

Other Potential Creek Work: Independent of EPA's planned work and investigations the ACoE plans to conduct some bank maintenance activities on Granite and Callahan Creek. This work most certainly will involve the contaminated areas of the Creeks. We are working with the ACoE to develop a plan to integrate the removal of the LA bearing rocks from their work areas with their restoration/repair work. Costs should be well under \$500k.

Additional Inspections: After conducting a record search with Lincoln County and the ACoE it appears possible that the LA bearing material may have been used on other Creeks in the Libby/Troy area. A complete assessment of all of these Creeks is planned for this Summer.